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Product Evaluation

RC411 | 0320

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure must not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-411

Effective Date: March 1, 2020
Re-evaluation Date: March 2024

Product Name: Grande Tile Aluminum Roof Panel

Manufacturer: Isaiah Industries
8510 Industry Park Dr.
Piqua, OH 45356
(937) 778-5111

General Description:
The Grande Tile Roof Panel is a formed aluminum tile metal roofing panel. Grande Tile Panels are constructed of 0.032" thick 3105-H24 aluminum alloy with each panel measuring 44-1/8" x 33-3/16". The preformed panels have a Kynar/Hylar coating.

Limitations:
Roof Deck: The roof deck must be solidly sheathed. The minimum required thickness of the deck must be 15/32" plywood panels.

Roof Deck Attachment: The roof deck must be secured to the roof framing to resist the required wind uplift design pressures.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1.

Roof Slope: The roof panels must not be installed on roofs with a roof slope less than 3:12.

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles. Grande Tile Roof Panels may not be installed over wood shakes or shingles, tile, cement shakes or other metal roofing. The minimum thickness of the existing roof deck must be as required for a new roof panel installation. Note: Inspection of the existing roof deck must be made before installing the roof panels. The condition of the existing roof deck must be acceptable to receive the roof panels before the roof panel installation can proceed. Note: A new underlayment installation is required when installing panels over an existing roof covering.

Table 1. Grande Tile Aluminum Roof Panel

Design Wind Pressures		
Roof Areas	Field	Perimeter and Corner Zone[1]
Roof Design Pressure	-66.1 psf	-93.65 psf
Max. Vertical Screw Spacing	13.875" At panel lap and every other low cell [2]	13.875" At panel lap and every low cell [3]

Note: [1]Extrapolation must not be allowed
[2]Every other panel low cell is spaced 13.78"
[3]Every panel cell is spaced at 6.89"

Installation:
General: Grande Roof Tile panels must be installed as specified in this evaluation report and as specified in the Grande Tile Installation Instructions as published by Isaiah Industries.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with minimum 4-inch side laps and minimum 4-inch end laps. The underlayment must be applied with corrosion-resistant fasteners and plastic caps. One row of fasteners is required in the center and one row along the edges. The fasteners must be spaced not farther apart than 12 inches on center.

Drip Edge/Starter Strip: A drip edge/starter strip must be constructed and installed as specified in the manufacturer's installation instructions.

Roof Panel Anchorage: The roof panels must be secured to the wood deck with #9-15 x 2-1/2" long stainless steel screws with 7/16" stainless steel bonded washers at the panel laps, and #9-15 x 1-1/2" long stainless steel screws with 7/16" stainless steel bonded washers in the panel field in accordance with the spacing in Table 1.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.